



TRK-10-005 Status Update

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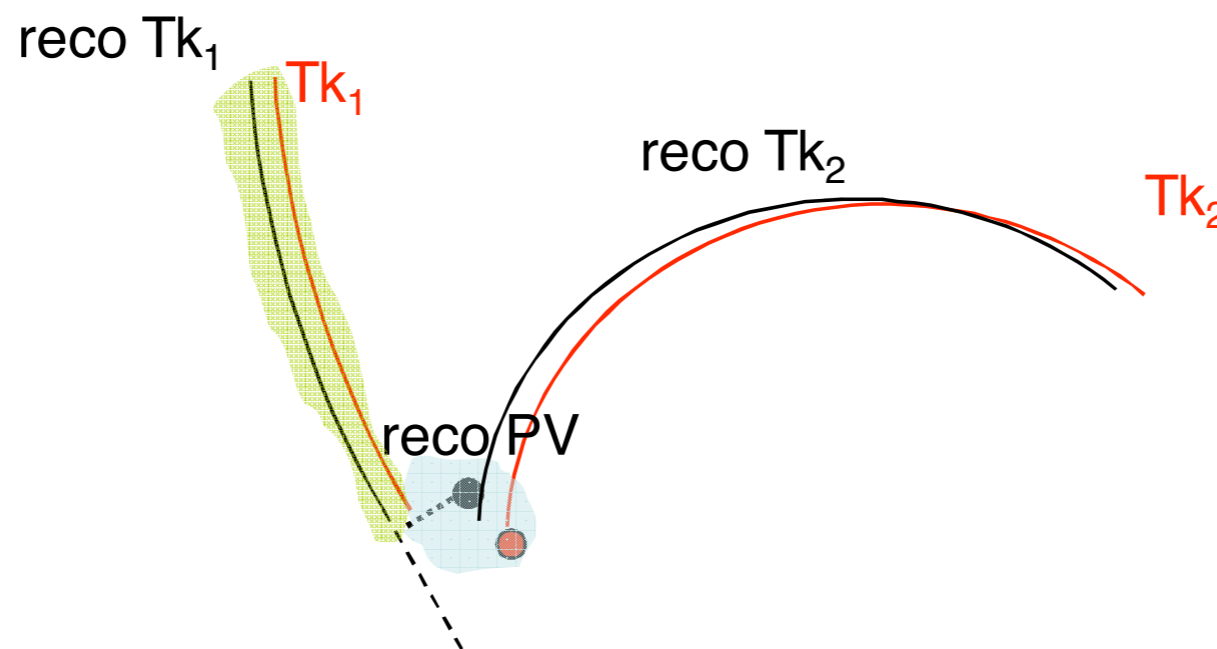
for TRK-10-005 Analysts

Track IP Resolution

Track Impact Parameter Resolutions

- Track IP resolutions can be extracted from IP(pvtx position) by unfolding the vertex resolution in a data-driven way

$$d0_{\text{meas}} = d0_{\text{true}} \oplus \text{"vertex smearing"} \oplus \text{"track impact parameter resolution"}$$

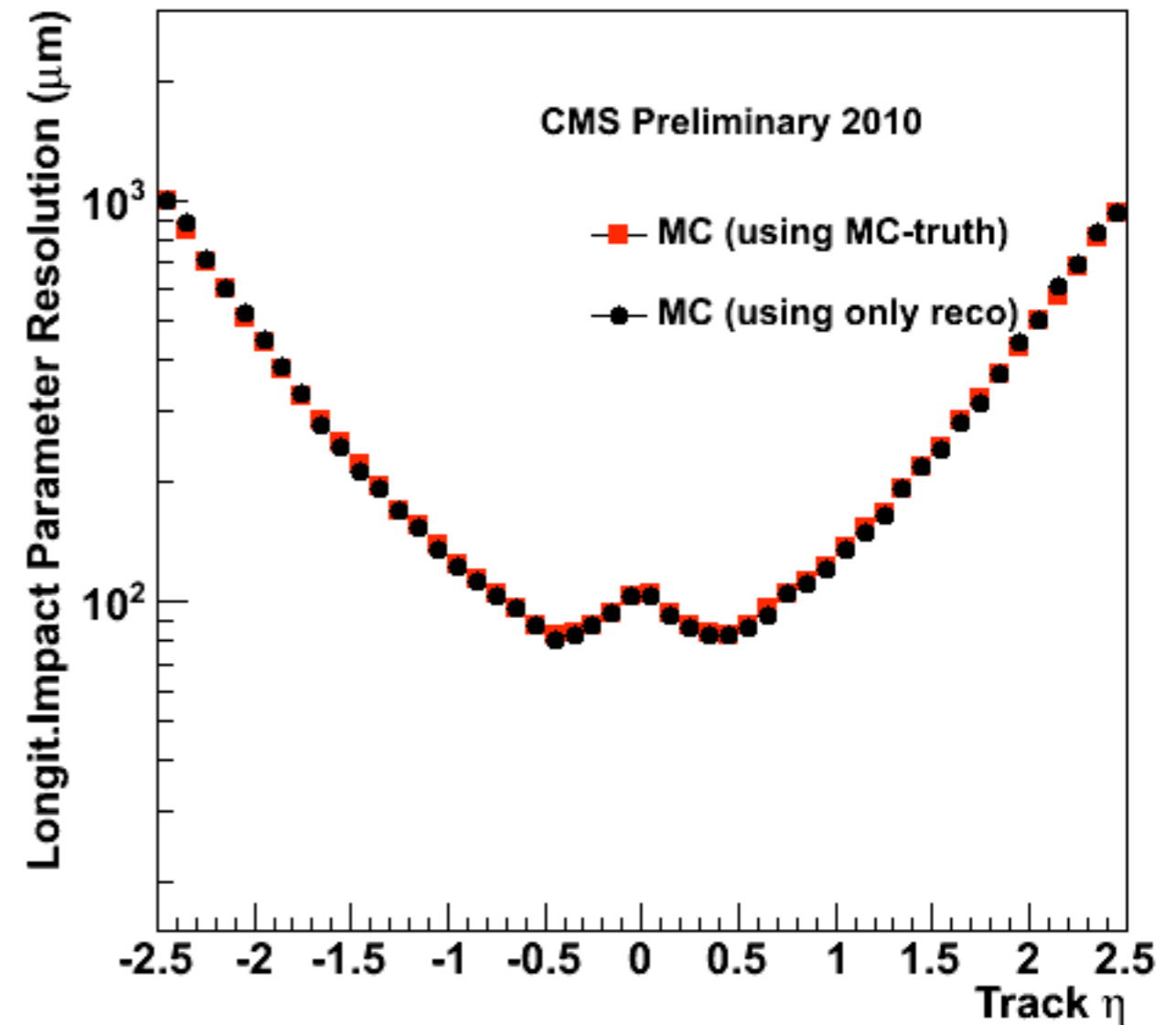
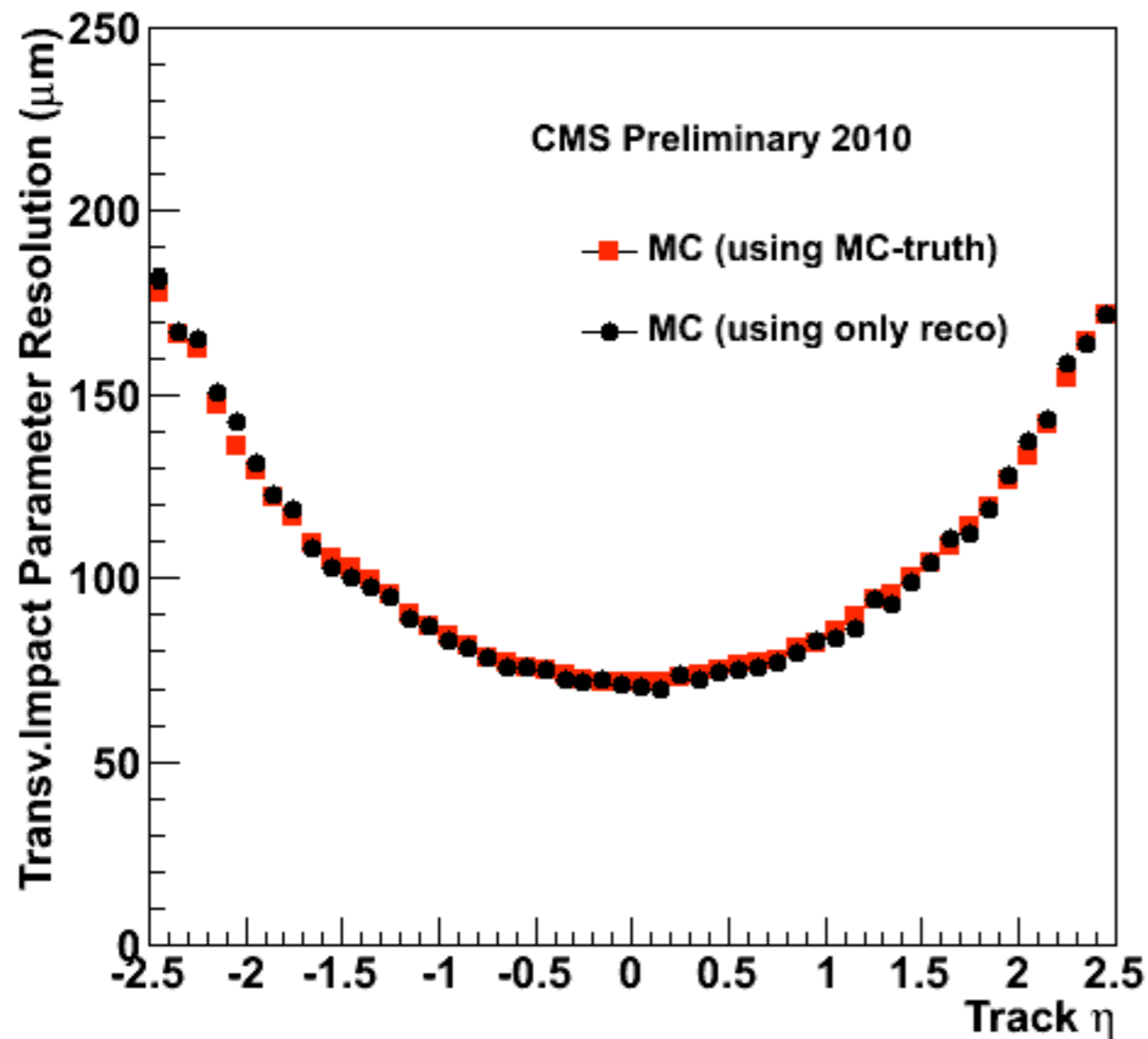


- This method can be validated in MC by comparing the results to the results obtained via MC-truth method (reco-sim)
- Details given at this talk by Boris Mangano

<http://indico.cern.ch/getFile.py/access?contribId=3&resId=1&materialId=slides&confId=84502>

Method Validation on MC (I/2)

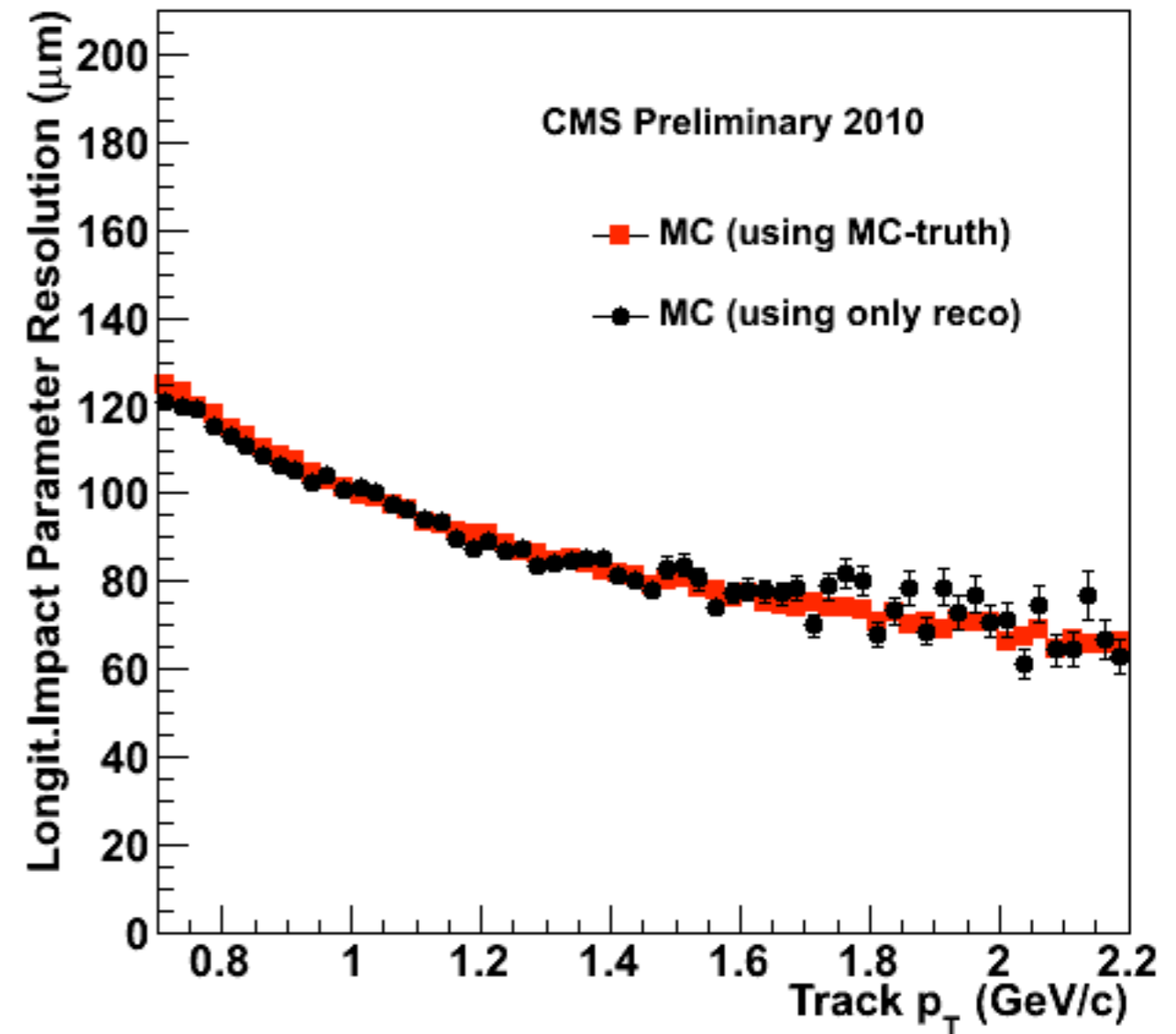
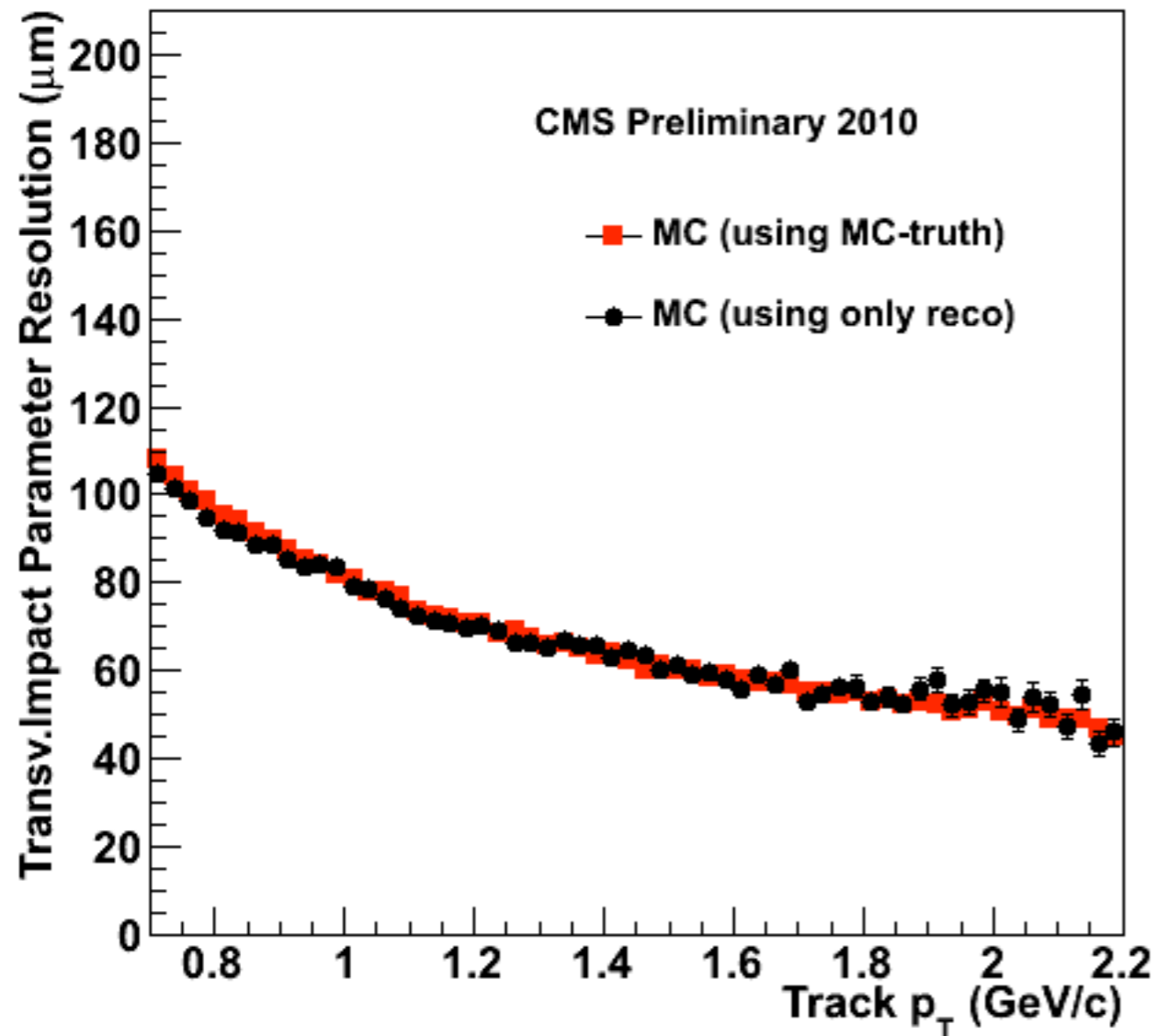
- IP resolutions vs eta, with $p_T > 0.8$ GeV



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Method Validation on MC (2/2)

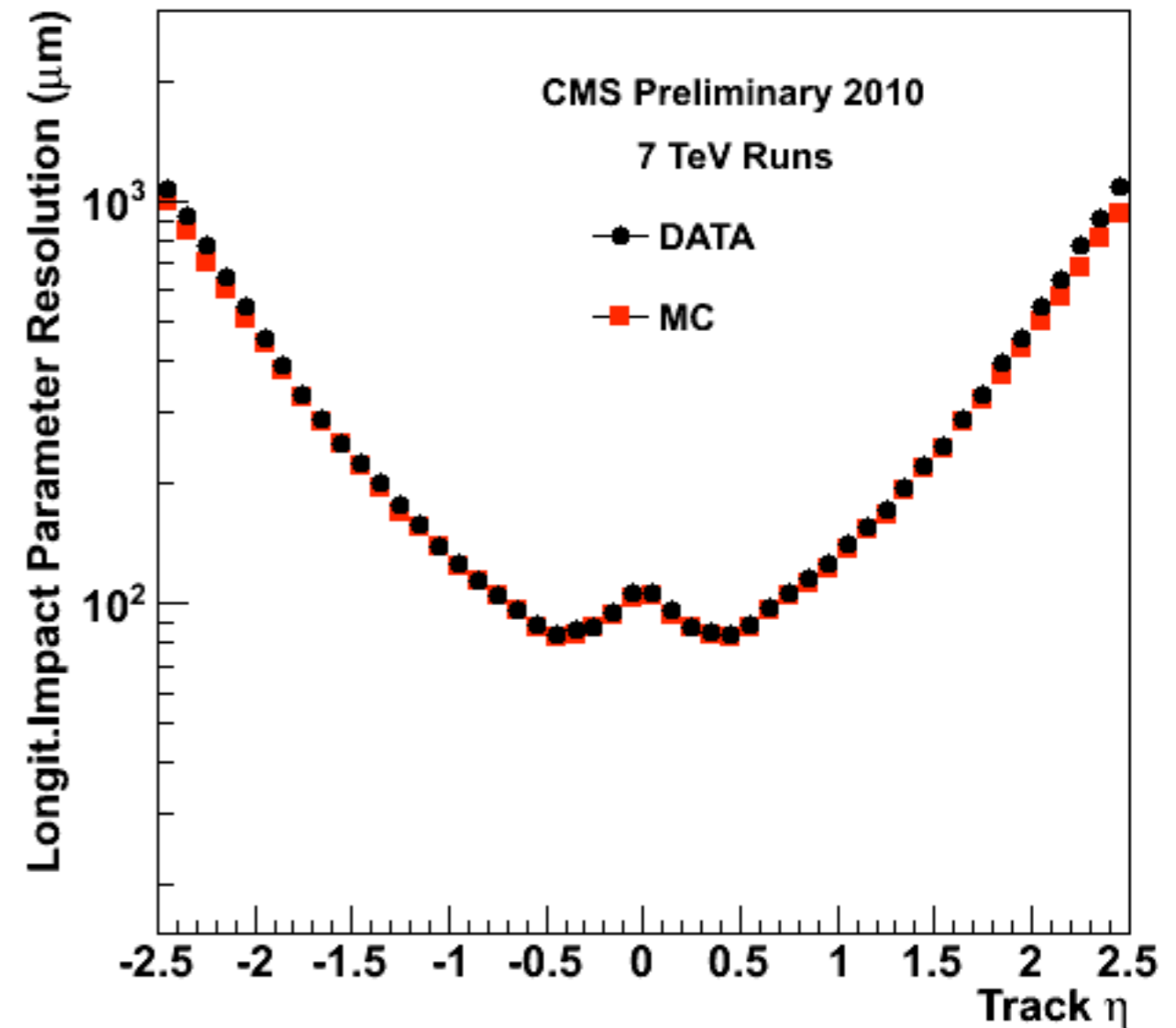
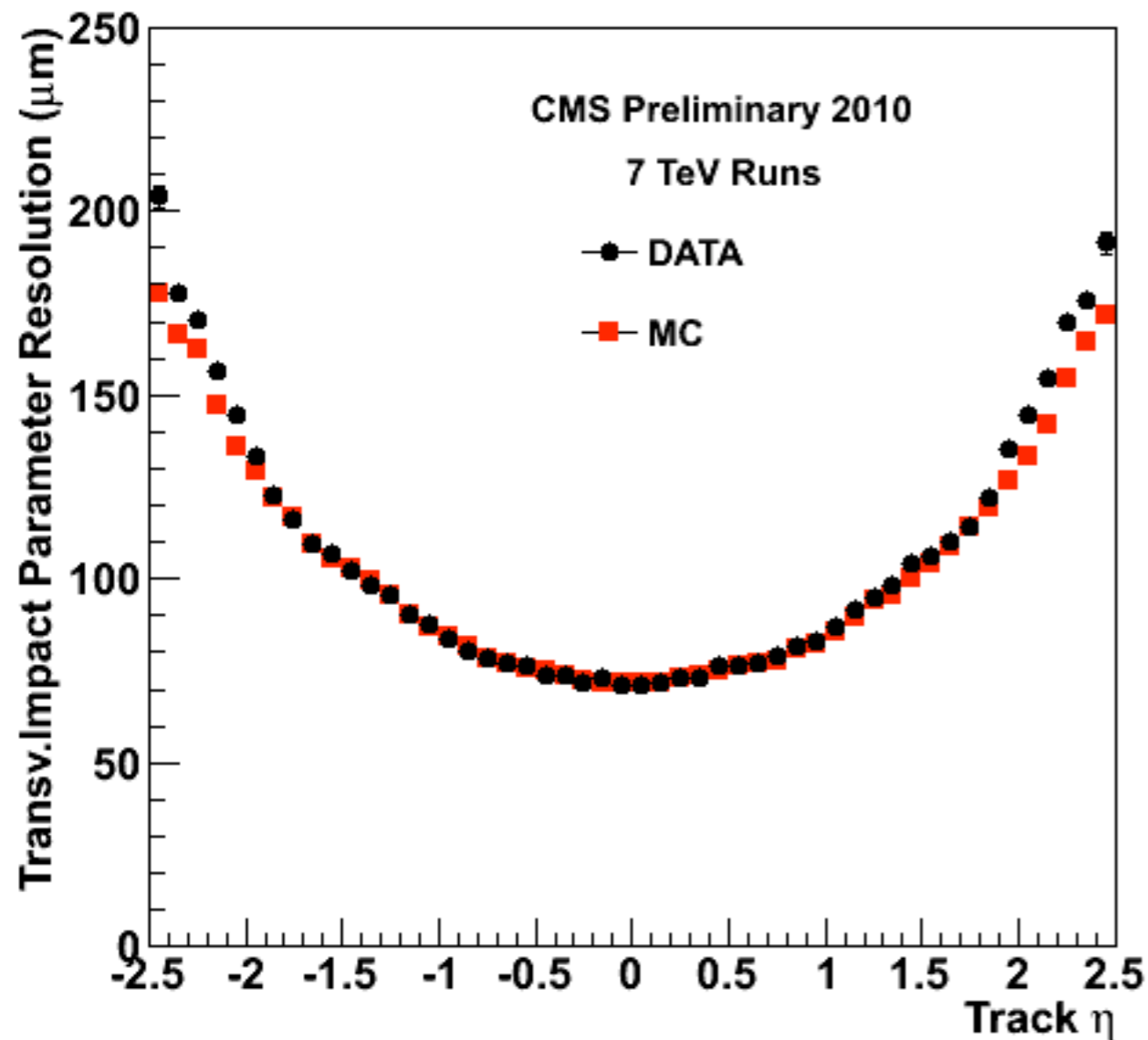
- IP resolutions vs p_T



- The p_T range can be extended by running on the un-prescaled data skim

Data-Driven Results on Data/MC (1/2)

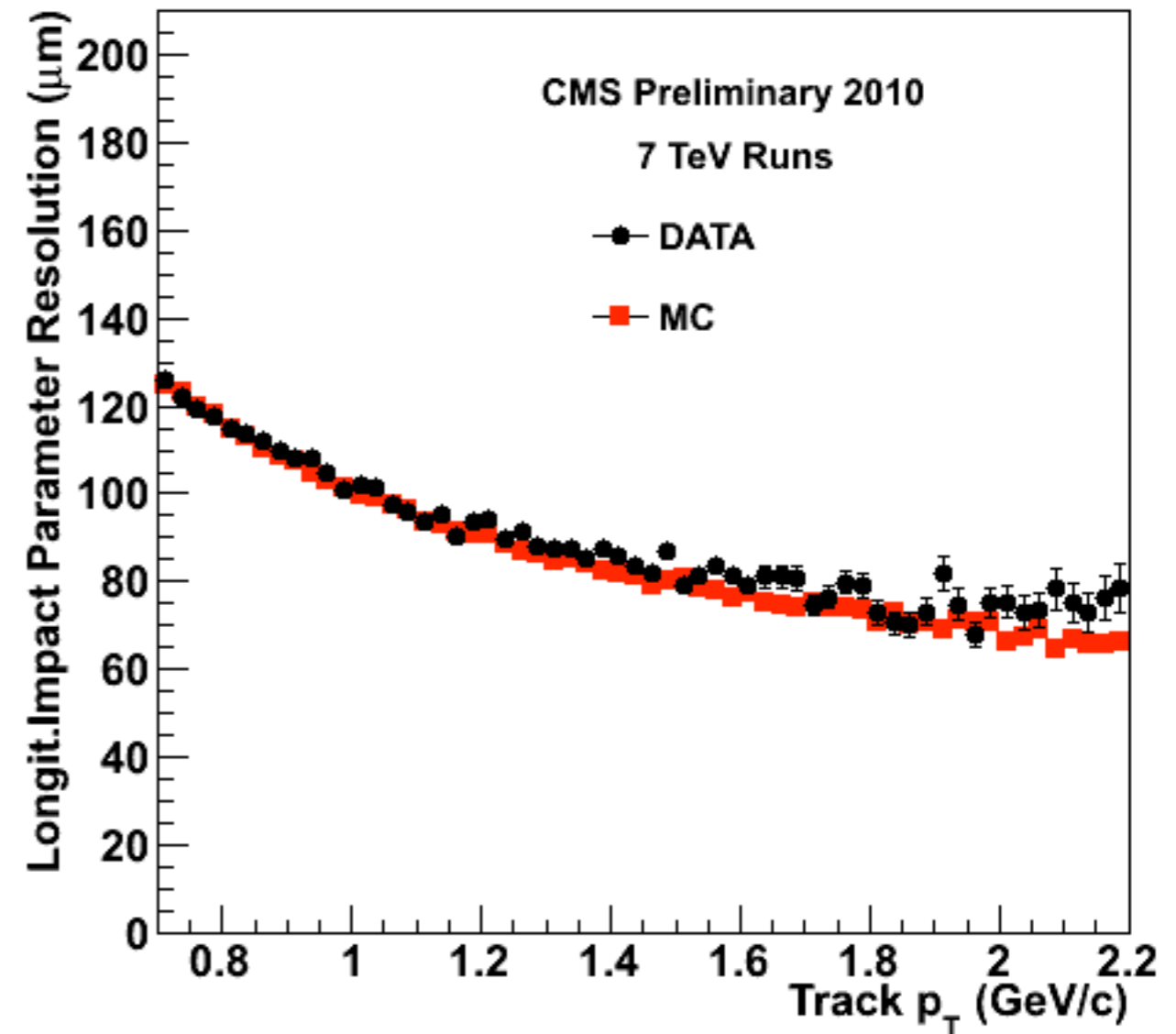
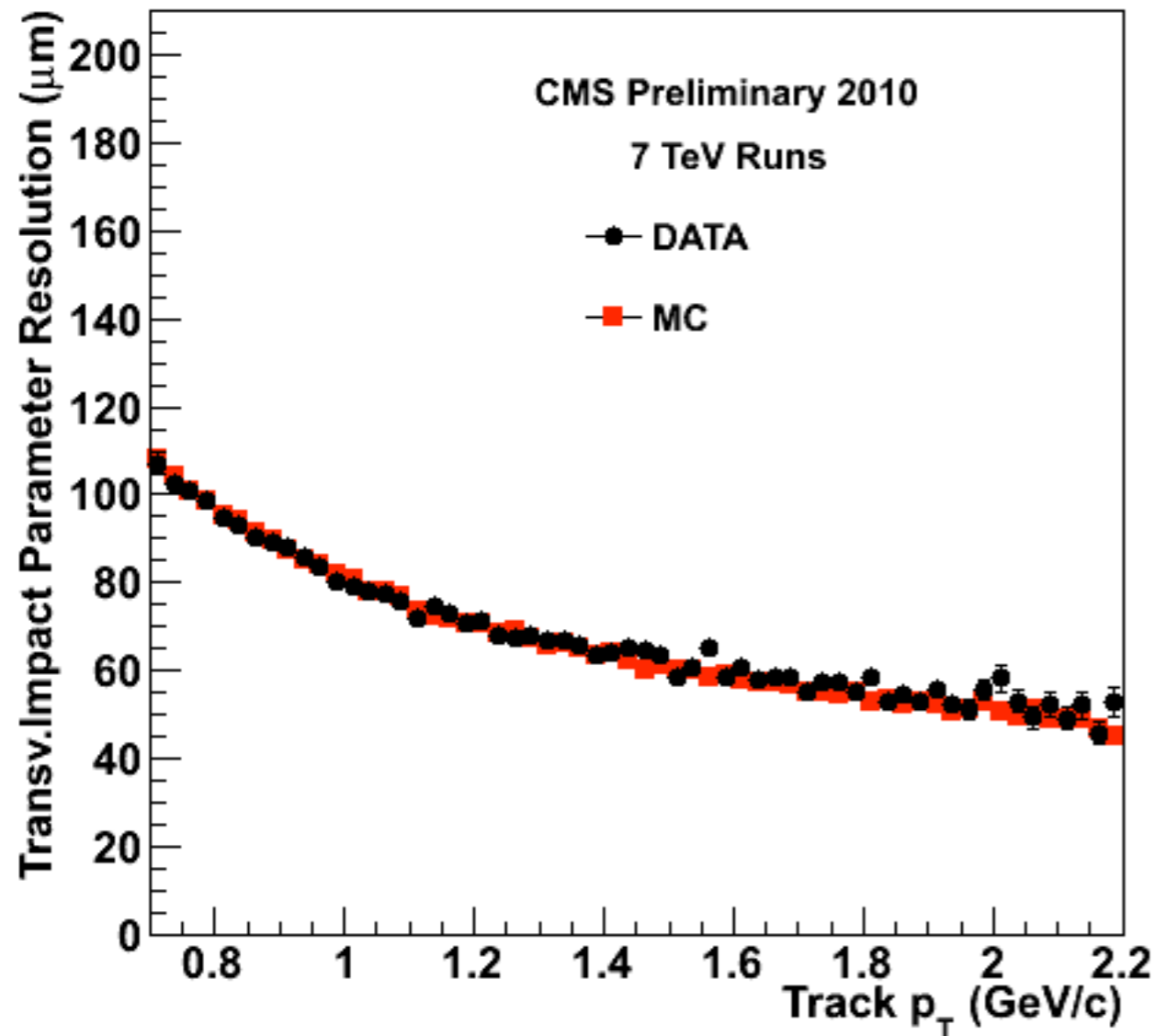
- IP resolutions vs eta, with $p_T > 0.8$ GeV



- The discrepancies at high $|\eta|$ region could be due to the data/MC difference in material or alignment

Data-Driven Results on Data/MC (2/2)

- IP resolutions vs p_T



- The last a few bins will be improved with more statistics and selecting hard interaction trigger bits (JET6?)

Primary Vertex Resolution

BeamSpot Reconstruction